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Revitalization Through Rehabilitation: Enhancing Communities Through Re-use

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To the Graduate Council:

I am submitting herewith a thesis written by Jason Stuart Pimsler entitled "Revitalization Through Rehabilitation: Enhancing Communities Through Re-use." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Architecture, with a major in Architecture.

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Revitalization Through Rehabilitation: Enhancing Communities Through Re-use

A Thesis Presented for the

Master of Architecture Degree

The University of Tennessee, Knoxville

Jason Stuart Pimsler

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DEDICATION

I dedicate this thesis to the loved ones who made my life possible. Starting with my father who is a practicing architect and instilled many values that make me the person I am today. To my mother and grandma who nurtured me along the way, and my brother for always being beside me.

ABSTRACT

The densification of an existing community through the implementation of sustainable design principles, such as adaptive reuse, promotes revitalization. The re-inhabitation of the proposed abandoned structure along the BeltLine can lead to further development of the existing arts complex. As part of this revitalization, linkages established along a city-wide master-planned path provide nodal connections between the local art district and the artists of the Goat Farm and educate visitors of the significant industrial history of the area.

The purpose of this thesis is to investigate the positive impact that sustainable architecture, adaptive reuse and proper planning can have on a community and the people who reside there. The goal of sustainable planning is to determine what a community is missing, then ultimately implementing a strategy that meets the needs of the people living in these areas. A successful strategy will employ the resources that already exist and use them in a beneficial and waste less wasteful manner. My hope is that by re-purposing existing historic structures that are vacant or under utilized, the improvements to the existing architecture will educate visitors about sustainable practices and promote collaboration amongst people.

PREFACE

When executed in the correct application architecture can serve as a very powerful device for conservation. It can serve as an instrument of outreach to speak to people on a macro level or in a subconscious manner. There are components embodied in the practice of architecture such as culture, material and history. When designing a project that involves the use of an existing facility the objective becomes increasingly more complex. The new proposal must not disregard the past but be innovative in its methodologies. Every component must be chosen with a consideration towards the community and its history. The underlying purpose should be to provide a stage for a community to grow and become a prototype for future development.

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“We do not inherit the earth from our ancestors, we borrow it from our children.”

~Native American Proverb

CHAPTER I
INTRODUCTION

Due to a lack of planning during crucial years of growth in Atlanta, the city consists of fragmented neighborhoods in the metro area separated by railroads and highways. This haphazard approach toward development led to Atlanta being ranked the fourth worst city for sprawl in the United States. Undesirable living conditions and lack of neighborhood connections during these crucial years of development led to unplanned expansion of Atlanta. This trend continues due to a lack of economic investment in the central city, with expansion taking place outside of the urban core.

This random unplanned growth that results from certain places being isolated from adequate land uses such as housing, jobs, schools, hospitals and mass transit is defined as *sprawl*. Development that results in sprawl negatively impacts the population, jobs and tax base of the central city. Sprawl creates a society dependent on the automobile and consumes land at an exponential rate. This is a serious problem, that needs immediate attention.

In response, it is my belief that a viable answer to mitigating urban sprawl and preventing the depletion of resources is to re-use all structures where this process could be applicable. Even if the end product results in a slightly larger expense to the owner, the effects of reducing the use of materials outweighs most inconveniences. Also, reusing resources is important, because it places architectural value on sustainability. It is my hope that as this becomes more of a rule of thumb for construction and the right methods are applied, that the process will become easier and less costly.

The site for my investigation is a series of 19th century industrial buildings in the west side of Atlanta, GA. This area of Atlanta is one that is already experiencing revitalization. It has many examples of successful development in close proximity that have taken advantage of adaptive reuse. The particular site that I am focused on is the Goat Farm Arts Center,

Figure 1: Top cities affected by sprawl

Figure 2: Atlanta skyline of downtown and Buckhead

a visual and performing arts center that has begun to re-purpose some of the older structures on the site. My intent is to design a master plan for this complex and to focus on the redevelopment of one structure in the plan. Based on my analysis, there are two components that are currently missing in the existing complex, including a welcome center, a food co-op.

In the United States we have been exploring how to build in a more sustainable manner for many years. These explorations include using local materials, recycling products and designing in a way that allows the user to leave the smallest ecological footprint possible. The process of constructing a building accounts for a large quantity of our natural resources. Diminishing material resources have never been more prevalent than they are currently.

In many instances the mind-

set of people in the building industry, as they approach a project involving an existing structure on a site, is to simply tear it down and build a new one, as opposed to attempting to reuse some or all of the existing structure. This approach tends to focus on there being unanticipated obstacles when renovating an existing building. It can even in some cases end up costing more to adapt an existing structure than it can to construct a new one. For example, instead of demolishing an entire building, removing specific parts can be more costly due to additional labor time. Additionally, in older structures, asbestos abatement and the removal of other toxic products can drastically drive up the cost of demolition. Obstacles such as these are common in many rehabilitions and often prevent the project from being executed.

CHAPTER II

ADAPTIVE RE-USE

The U.S. National Trust for Historic Preservation, began in 1950 and was put in place in order to devote resources to save America's historic places and bring life back to communities. This led to the development of historic districts, which were groups of buildings, properties, or sites varying in size that have been deemed historically or architecturally significant by one of the designated organizations in the area. There are two sub-categories of historic buildings, which are contributing and noncontributing.

The line between contributing and noncontributing can be very subjective and early records of noncontributing structures are not very common. As long as the building has historical or architectural elements consistent with the elements listed on the register checklists, they are considered to be contributing to the communities history. Government agencies have stringent definitions of what qualifies as a contributing property because historical connections can be tied to material palettes.

A historic district is an area that is listed on the National Register of the Historic Places, which can allow a street or community to preserve its character through a historic preservation program. This type of plan can revitalize an area and be used as an economic development tool for the local business while taking advantage of the historical considerations. After examining these basic rules of thumb for preservation it is apparent that the designer does have flexibility in the renovation of an older structure, but it is of the utmost importance to ensure that the components that make the structure historically significant remain intact and are incorporated carefully into the new project.

A successful implementation of adaptive reuse is one that allows all traces of the historical building to stay recognizable, and if something that is not as historically significant is altered then it is done in a way that does not detract from its counterparts. When done correctly, the old building is given a new purpose. This process entails a lot of time and

consideration concerning what exists and what are the key components of the design that makes it a sense of community. This can be reproduced in present times and can allow a building to be part of a community and also allow a community to become part of a larger society.

Preservation has changed a great deal over the years from its origin to current times. In the past, preservation was about maintaining a property, but it has transformed to focus more on creating a sense of re-use and re-purpose. Looking back a few years there were not nearly as many projects getting recognition for restoration. This could be in part because the architectural workforce seemed to view the field of preservation as something unattractive, perhaps because designers felt that they did not have as much freedom in the design since the existing structure had to remain intact. They viewed these conditions they had to follow as being constraints, when they could have these constraints serve as drivers for their design.

Today, adaptive reuse is an important and highly desired area of the design realm. With the recent economic conditions and the importance of recycling, reusing material is being emphasized more than ever. Some of the most well known architects in the world are going after adaptive reuse projects. Historically, most people viewed building as involving constructing something new, and by that definition, adaptive reuse was merely understood as a process of taking an existing building and retrofitting it to accommodate its new purpose while never actually designing anything. This is, however, lacking an understanding of the difficulty of renovating a historic structure. In fact, operating within such rigid constraints can actually be an immense design challenge.

Preserving a structure, due to its historical significance without proposing a new usage is simply prolonging the process of decay and should be avoided in order to re-purpose and occupy the space on a daily basis. This act of occupying promotes a sense of an active community and renewal. Another vital component to occupation is to ensure that design

Figure 3: Main entrance of King Plow

Figure 4: Structure on Goat Farm complex

Figure 5: Remnants of a structure on Goat Farm complex

is undertaken in a manner that does not forget the past, but rather acts as a living representation of what used to be, to show homage to the past culture. I am an advocate of fully examining the social implications of the site and its structure before attempting to improve it.

Figure 3 demonstrates adaptive re-use projects near the site, one in particular being the King Plow Art Center. In 1990 King Plow renovated a series of old brick warehouse buildings into a series of mixed use developments. Then in 2006 White Provisions opened, which is a series of retail shops, most of which were retrofits of existing industrial buildings. These are both examples of adaptive re-use developments that are successful and to this day still continue to help revitalize the area. White Provisions and King Plow Arts Center have done an excellent job of maintaining the historic character of the existing building, while implementing the

modern conveniences necessary to accommodate their usage. They clearly distinguish any additions from the original design. It was useful to use King Plow as a case study for successful adaptive re-use in the Atlanta area because the program of art galleries, live work studios, commercial spaces, performance spaces and a restaurant are transferable to my proposed renovation.

Adaptive re-use is one possible answer to the problem of choosing to not work with an existing structure. When buildings are neglected for an extended period of time they begin to deteriorate. Figure 4 shows a structure located on the Goat Farm, that is ultimately just a series of exterior walls. Figure 5 shows a structure that has been given up on and is most likely going to be condemned in the near future due to its physical state of condition.

CHAPTER III

DENSIFICATION

The most effective approaches to combat urban sprawl are to reinvest in neglected communities, rehabilitate abandoned properties, and to encourage new development and redevelopment in the existing urban fabric. Most of these activities fall under the category of adaptive re-use. Not only is it sustainable to reuse the existing materials from the structure, but this re-use promotes urban density as opposed to contributing to urban sprawl. In my opinion this type of density in an urban atmosphere allows for a more sustainable lifestyle to take place.

The Government of the United Kingdom defines a sustainable community in its 2003 Sustainable Communities Plan as, "...places where people want to live and work, now and in the future. They meet the diverse needs of existing and future residents, are sensitive to their environment, and contribute to a high quality of life. They are safe and inclusive, well planned, built and run, and offer equality of opportunity and good services for all." (Maliene, 2008)

"The more successfully a city mingles everyday diversity of uses and users in its everyday streets, the more successfully, casually (and economically) its people thereby enliven and support well-located parks that can thus give back grace and delight to their neighborhoods instead of vacuity. " (Jacobs, 2002)

As part of my investigation I will analyze how areas of resurgence can affect the infrastructure of an area. Sustainable communities are areas that are designed with a plan that focuses on living responsibly for future generations. The objective is to create a community that is environmentally responsible. A way in which this will be achieved is by recycling, conserving water, and reducing energy consumption. In order to facilitate such measures the correct infrastructure must be in place. An example would be to have mass transportation in close proximity to an area reducing the dependency on motorized

The Impact of Sprawl:
Outcomes Affected by Sprawl in Atlanta

Peak 8-hour ozone level (parts per billion)	120
Fatal accidents per 100,000 persons	13.86
Daily Miles Driven per person (DMVT)	33.80
Average number of vehicles per household	1.81
Percent of commuters using Transit	3.92%
Percent of commuters walking to work	1.31%
Average commute time, in minutes	31.31
Average annual traffic delay, in hours	32.69

2000 Population: 3,945,450

Figure 6: Atlanta being the 4th worst sprawling city in U.S.

Figure 7: Boundary of Atlanta metro area

The Impact of Sprawl:
Outcomes Affected by Sprawl in Boston

Peak 8-hour ozone level (parts per billion)	83
Fatal accidents per 100,000 persons	5.67
Daily Miles Driven per person (DMVT)	21.50
Average number of vehicles per household	1.52
Percent of commuters using Transit	12.88%
Percent of commuters walking to work	4.97%
Average commute time, in minutes	28.61
Average annual traffic delay, in hours	28.05

2000 Population: 4,001,752

Figure 8: Boston is the 7th least sprawling city in U.S.

Figure 9: Boundary of Boston metro area

vehicles. Another alternative is to supply stores nearby allowing the occupants to walk or bike in order to get what they need. Additionally, growing crops on site will reduce the need go off site in order to get food for parts of the year.

Figures 6-9 reinforce the fact that urban density can lead to a city being more pedestrian friendly. The Atlanta metro area is being compared to the Boston metro area and they both have similar populations but Atlanta is much more spread out, geographically. The criteria listed in the charts reinforce the fact that sprawl is bad for the infrastructure of the city and the environment. Statistics such as cars per household, percent using mass transit, percent walking to work and many more.

Education is another major component of this process because it is never too early to begin to teach people about topics related to this methodology. Schools will be

Figure 10: Los Angeles, CA

Figure 11: New York, NY

improved, along with the value of the land, and jobs can begin to be more prevalent in close proximity if these areas are improving, even if only one building at a time.

Sustainable communities are being implemented around the world and as more of these plans prove to be successful the more they will serve as a prototype for the future. A well functioning community is easier to achieve when planning a new development, but areas can be re-designed to help an existing community in need.

Disconnections in the urban fabric can occur when are an excess of structures that are dormant. These gaps in the neighborhood do not promote a sense of community, and typically create a wasteland effect, and can even facilitate activities that have a negative impact on the local surroundings.

I believe that one promising answer to reducing these effects is to

rehabilitate existing structures with new purposes. My proposed design addresses the need for density through several architectural techniques. Firstly, by creating a mixed-use development, I am able to give the Goat Farm Arts Center activity throughout the day, in that, during the business hours, studios will be occupied and operated by artists, and during the evening, performances and residents will enliven the space. Secondly, by choosing an industrial site that is currently a hole in the urban fabric, I am increasing the overall density of midtown Atlanta.

By performing adaptive reuse on these dormant structures as opposed to selecting a new site, we can reduce urban sprawl. Depending on the existing structure, many components can be reused which would reduce the amount of new materials needed. Also, there currently are multiple tax incentives encouraging this process of adaptive re-use, such as historic tax credits and facade easement programs.

CHAPTER IV

RAILS TO TRAILS

In the fall of 1999 as a response to mitigating urban sprawl in Atlanta, Ryan Gravel, a graduate student who was pursuing his Master of Architecture and Master of City Planning at the Georgia Institute of Technology, conducted his thesis on the idea of the Atlanta BeltLine.

“The Atlanta BeltLine is the most comprehensive revitalization effort ever undertaken in the City of Atlanta and among the largest, most wide-ranging urban redevelopment and mobility projects currently underway in the United States.” (Beltline.org, 2013)

The BeltLine, a partially completed project that involves removing Atlanta’s abandoned railroad tracks and replacing them with green ways with a potential streetcar system that would run parallel to the pedestrian friendly walkways, is planned to run directly adjacent

Figure 12: Axon of Atlanta BeltLine expected completion 2020

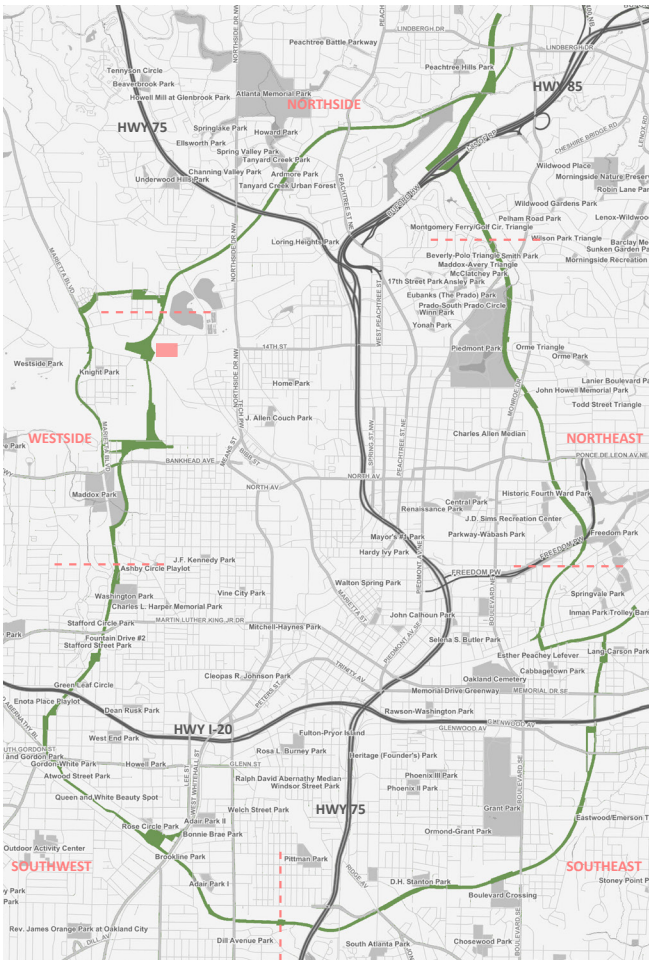

Figure 13: Twenty-two mile BeltLine loop

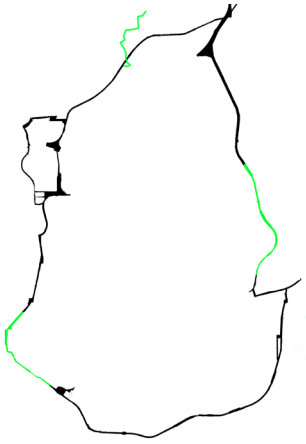

Figure 14: Completed portions of the BeltLine in green

to the east side of my proposed site. This twenty-two mile loop will serve as a way to mitigate sprawl by connecting previously detached neighborhoods.

The BeltLine project, currently under construction, will extend towards the Goat Farm. The BeltLine is focused on transforming the city through improvements and connections of forty-five neighborhoods. The concept is to take vacant railroads and re-purpose them by creating pedestrian green ways, public parks, multi-use trails and transit. This transformation of a combination of art, housing, trails and greens spaces, will serve as an example of what can be achieved through community interaction. This project is an excellent example of how a city can reinvest in itself and be a prototype for planned growth and sustainability.

There are currently three portions of the BeltLine that are built

Figure 15: Rendering of BeltLine

Figure 16: Finished portion of BeltLine

Figure 17: Artist instillation on BeltLine

and open to the public, which can be seen in figure 14. The BeltLine operates under the mind-set of being a project that is about reconnecting the city as a whole. There are plans of building segments of the trail in all areas of the BeltLine as opposed to completing this process one piece adjacent to the other. The BeltLine is seen as a chance to connect communities and rethink what Atlanta has to offer.

"The beauty of the Atlanta BeltLine is that it offers not only modern conveyances and exciting new development, but it is a living, breathing part of our community; not simply a means of getting somewhere, but a destination unto itself. It offers a chance for Atlanta to redefine what it is to be a neighbor, to be a community, to be a region, and to share all that it has to offer." (Beltline.org, 2013)

The long term plans of implementing a street car system

Figure 18: Skate park adjacent to BeltLine

Figure 19: Pedestrian bridge on BeltLine

Figure 20: Water treatment center

further promotes the use of alternative modes of transportation besides the automobile. The BeltLine will serve as a way to connect the Goat Farm more readily to the public, and allow the public to easily see performances and installations at the Goat Farm. The Goat Farm will receive a great deal of foot traffic, as another venue along the BeltLine for people to have the option to interact with. Figure 17 depicts a spot along the BeltLine where an artist is displaying their work.

The Beltline is already showing signs of being a positive entity for the communities it is connecting. Figure 18 shows a skate park which as an extension of the BeltLine and provides a safe and sanctioned place for people to skateboard. There is also a playground with a large field next to it establishing a destination that can be reached using the Beltline to travel to and from safely and conveniently.

The reason that the BeltLine is such an important part of the future of Atlanta is that it creates a desirable destination and one that projects may expand on. There are already examples of retail, and residential developments adjacent to the Beltline.

Seen in Figure 20 is a bio-remediation water park that is adjacent to the BeltLine. It serves as a 100 year flood zone while also creating a destination for the public to enjoy. Unlike the Highline project in New York City that is far from being a sustainable development, the BeltLine takes advantage of using all of the existing infrastructure and adding on to it, an example would be the utilization of the structure of the pedestrian bridge being shown in Figure 19.

"The BeltLine and its associated properties can accommodate tens of thousands of new residents in the central city in ways that reduce dependence on automobiles, reuse valuable urban land, create economic growth for the city, improve mobility in traffic congested Atlanta and make evident historic spatial boundaries and settlement patterns, contributing to civic identity." (Gravel, 1999)

Figure 21: Neighborhoods on BeltLine

CHAPTER V

SITE CRITERIA

The proposed site, previously an industrial cotton manufacturing facility, is being developed as an artist oriented complex called The Goat Farm. It is located at 1200 Foster Street just west of Midtown Atlanta. I chose this site for three reasons: it is located at a pivotal point along the BeltLine, there is a great deal of current development taking place around it, and it provides the ability to re-purpose a structure that, without being saved, would eventually be unsalvagable. This adaptive reuse project will connect to the beltline, provide a destination along the BeltLine, and serve as a model for future development promoting a pedestrian friendly environment.

This Goat Farm addresses many criteria of my thesis since the site has historical significance and is located in an urban context. It is situated between Atlantic Station which is a thriving commercial and residential development and a developing neighborhood that is disconnected from midtown Atlanta. My design will bridge the gap between the Goat Farm artists and the residents in the Atlanta area, by creating a place where residential citizens might benefit by visiting an artist compound in close proximity, being educated in crafts and having a place of refuge in a dense urban atmosphere.

After conducting an extensive study on all uses in this area, zoning in Atlanta is very haphazard and many conflicting occupancy uses that are adjacent to each other. There are residential neighbors intermingled with commercial and industrial. Basic needs like grocery stores are not among the commercial services offered. Mixed-use is practically non-existent in this area, resulting in an overall lack of community.

Through extensive research, I have realized that this site is unique in that it is in close proximity to many places that are flourishing; some of which have dealt with the issue of adaptive reuse in a successful manner. To the south, White Provision which is a series of trendy, popular restaurants and retail establishments, have been located in existing

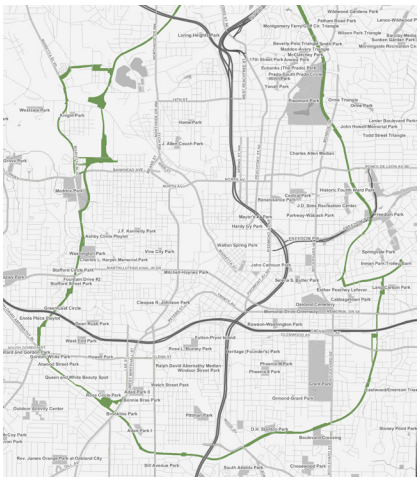

Figure 22: Adjacency to BeltLine

Figure 25: Highline NYC

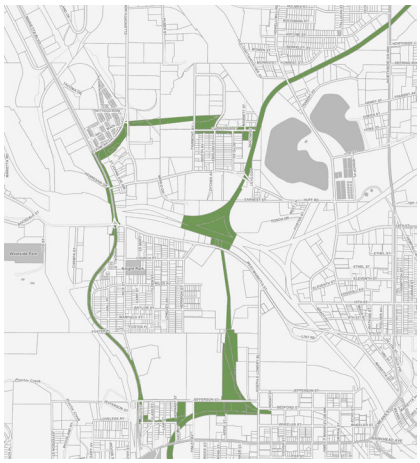

Figure 23: An area of transformation

Figure 26: White Provisions

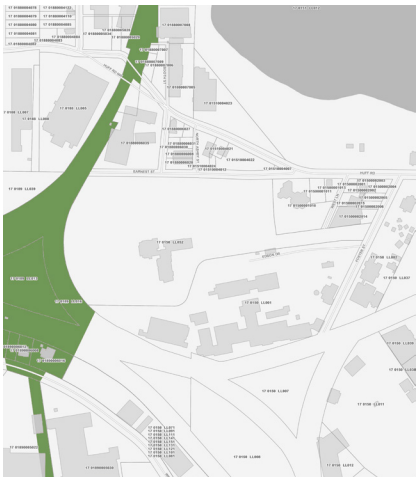

Figure 24: Historical site

Figure 27: Goat Farm Arts Center

structures as adaptive reuse projects. To the north there is the Atlanta Waterworks Reservoir, the second water retention dam commissioned for Atlanta in 1892. This area will likely never have built structures erected on it due to the primary use of this land.

Similar developments like the High Line in NYC have proved to have a positive influence in revitalizing struggling areas of the city, and connects gaps within the urban fabric which are important in mitigating sprawl. There have also been some similar renovations in recent years to the Atlanta area, a development called King Plow Arts Center, a series of mixed use buildings centered around the realm of performing arts.

"We see the arts as an economic tool that is just as important as any other service people pay taxes on." (Anthony Harper, 2013)

For revitalization to work in an urban area like Atlanta, there has to be investment in nearby areas with the potential for further development. One of the most effective ways to mitigate sprawl is to re-purpose vacant buildings such as post industrial warehouses. Many times these buildings have a historical connection to a city and a community which is no longer present.

"But when you look at where innovation and creativity and new ideas come from, they typically don't come from the skyscraper districts. They come from older neighborhoods with mixed-use buildings that have warehouses and industrial areas...where people can mix and mingle and interact, combine and recombine. And that's where the spur for innovation and creativity comes from." (Florida, 2012)

CHAPTER VI

HISTORY OF SITE

The E. Van Winkle Gin and Machine Works is a eleven point three acre site with fifteen industrial buildings and a water tower nestled amongst the railways. Most of the buildings are red-brick buildings with load bearing masonry exterior walls and “slow burning” timber-and-plank interiors with some cast-iron structures. The complex was developed over several decades between the 1880’s and 1930’s, focusing on demonstrating the use of utilitarian construction and the implementation of technological advancements of the era such as planning around train transport. Listed on the National Register of Historic Places, the complex is a significant representation of a well preserved and almost fully intact late nineteenth century manufacturing complex.

During the 1880’s Van Winkle was one of three cotton-gin manufacturers in Atlanta and the only cotton-seed-oil mill producer in Georgia. When Van Winkle died in 1923, the Atlanta Journal Constitution published that the complex had an important effect upon development of the cotton manufacturing industry in the South. Later during World War II, the plant was used to produce ammunition and mortars. In 1966 the site was held in trust by Trust Company of Georgia until 1972 when Robert Haywood, the current owner, purchased the property. In 1972 Robert Haywood bought the site and allowed artists, sculptors, musicians photographers, and painters to set up their studios there. The complex has been on the register of historic places since 1979 because it preserves the model for late nineteenth century manufacturing campus.

In the early 2000’s the site was used by antique dealers and after that was unoccupied for several years. On July 15, 2012 the property was bought by Hallister Development, who specialize in renovating historic structures. In 2009 Hallister cultivated the site as being a visual and performing arts center containing education centers, exhibitions, performance areas, café, library, organic farm, dance spaces, and studios.

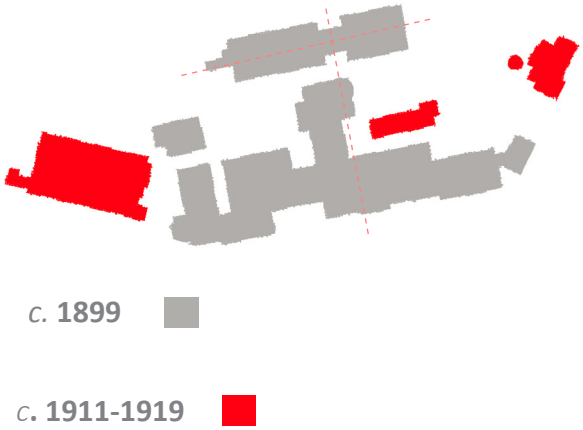

Figure 28: Chronology and axial alignment

Figure 29: Advertisement for Cotton Ginnery

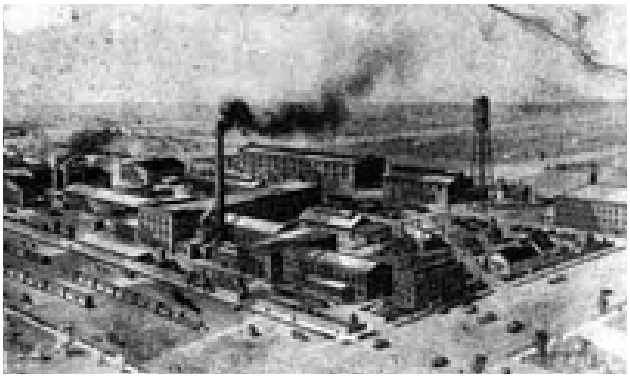

Figure 30: Etching of complex *c.* 1915

Figure 28 shows the original orientation of the site and highlights in grey the buildings that were constructed in phase one. These buildings held an axial relationship to each other that allowed for efficient production and ease of unloading. The site was designed around accommodating the use of the railroad lines.

There are examples on the property of what happens to buildings that are left vacant for a long period of time and end up being condemned due to being structurally unsafe by state officials. The purpose of my master plan is to salvage all structures possible and prevent this process of decay from occurring any further.

The water tower is part of the history of the site that I would like to preserve. The tower used to hold 20,000 gallons of water and sits above an 80 foot high trestle. The trestle serves as an example of the

technological advancements that were being implemented at this point in time. The water tower has been in place since 1911. There is also a flagpole that sits at the corner of the property that used to serve as a marker of arrival upon ones approach to the site from Foster Street. This is an example of the sites cultural artifacts that I will not only preserve, but make a focus of the property.

CHAPTER VII

GOAT FARM

Currently, upon approaching the Goat Farm from Foster Street, there is a gravel road that leads to two entrances. The main entrance has a gravel and dirt road that encourages people to park on the grass and has undesirables such as the trash receptacles situated near this zone. The secondary entrance is also a gravel lot and brings the visitor directly into the heart of the complex. The parking is not laid out and there are elements such as mailboxes that are placed haphazardly. Clearly defining the entrance sequence and providing a location for some of these amenities will be one of the goals of the proposal of my project.

After conducting the site inventory there was one structure that could serve as a potential visitor center and aid in establishing a sense of reaching a destination. Located near the existing main entrance is a breezeway connecting two of the buildings which could serve as a place to pick up and unload passengers or goods while having the convenience of being covered. This porte cochere could lead to one of the two adjacent buildings which could potentially be converted into a visitor center providing an informational display of the site and its various functions.

Other issues that I have observed while conducting the site inventory include the placement of the coffee house. Designed to feel similar to a home, the small scale and outdoor patio creates less formal and more relaxed environment. The location deserves some consideration, because it is currently placed in a position hidden from the public upon arrival. I will explore the idea of the coffee shop serving as more of a focal point upon arrival and possibly being coupled with the visitor center.

One element of the coffee house already in place is the educational component of the library. This is an excellent offering in my opinion and could be taken further. In conjunction with the visitor center the library component could serve as an educational

Figure 31: Arched tunnel

Figure 32: Walls of an existing building

Figure 33: Sawtooth Building

tool for visitors allowing them the ability to learn more about the history of the site and topics of sustainability.

There are other existing conditions that I will address such as the school that is located adjacent to the property. Currently the Howard School, an institute that serves as an elementary, middle and high school, has chosen to fence their property off from the Goat Farm. Creating access from one site to the next and allowing the Goat Farm to serve as an outlet for the Howard School , so that the students and staff could become involved the various arts and crafts taking place next door at the Goat Farm Arts Center is a chance to reinforce the concept of collaboration.

On this site, some structures are just not programmed at the moment and have not been re-purposed. These structures are slowly deteriorating and potentially attracting negative activities. These would be better suited being programmed

Figure 34: Outdoor dance performance

Figure 35: Fund-raiser outside sawtooth building

Figure 36: Workshop being taught

even if they might not have a roof and can only be utilized as outdoor performance spaces or gardens.

The Goat Farm does have livestock such as chickens or goats on site which offer low cost livestock. This agricultural component on the site could be expanded upon. I will implement a small scale operation where people will have designated plots of land where they could grow crops. This would be maintained by the artist residents and the harvest would only be enough to feed the residents but would serve as an educational tool for visitors that are interested in community supported agricultural practices. The water tower would be re-used as a way to collect water to use for irrigating the gardens.

“What makes the Goat Farm special is that everyone here is always looking for a new innovative way to do something” (Harper, 2013)

There are applications already

Figure 37: Existing railroad track

Figure 38: Old Industrial Machinery

Figure 39: Water Tower

in place that take advantage of the existing components. Examples of this are a track system in the auditorium converted from an old pulley system to a track for a curtain to slide on, or the new steel pieces being installed to support the wooden trusses to salvage the old wood while stabilizing the existing structure.

It is important to not only practice sustainability as it relates to the environment but also to invest in the cultural value of a place. Plaques and kiosks will be placed throughout the site to help educate the community about sustainability in the cultural, ecological and economical realm.

Additional examples of re-use would be equipment that previously facilitated the drop off and pick up of goods and now supports swing sets and provides views of the city. Also Figure 42 shows an older steel siding door that was left in place to serve as a reminder of what used to be.

There are definitely still

Figure 40: Old drop off rail system

Figure 41: Octagonal structure

Figure 42: Old steel door

opportunities on this site to further embrace the history of the site and re-purpose existing components remain. Such as dormant railroad tracks that have never been removed from the site Figure 37. Instead of being partially hidden in the ground these tracks among other components on site are opportunities to further celebrate the remains of the past life of the site.

Old machinery still exists on the property such as the ones being shown in Figure 38. These would be placed on display in an area that is covered which would save them from being exposed to weathering. These types of artifacts could be part of the museum portion of the visitor center, and would easily be accompanied by some information telling us how they used to function previously.

Figure 43: Existing coffee shop

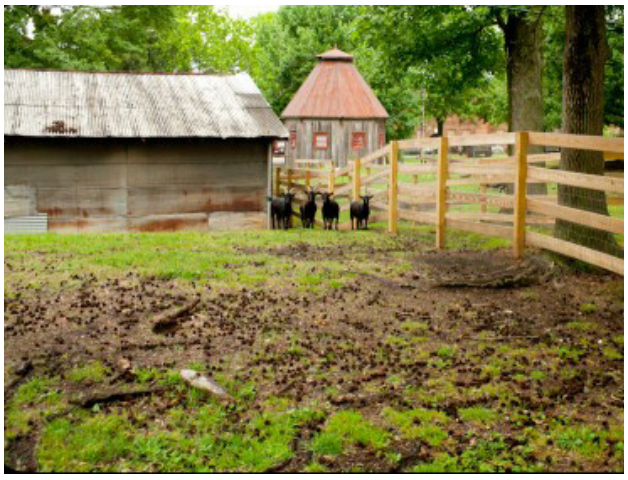

Figure 44: Goats on site

Figure 45: Birds on site

CHAPTER VIII

RE-USE POTENTIAL

The Goat Farm site provides many opportunities for re-use of materials and structures. Some applications have already been implemented such as the re-purposing of some of the industrial buildings. The structures that have been neglected and overlooked due to their poor state should be the next step in rehabilitating the site. This is why I chose the sawtooth building which was built in 1919. The history of the sawtooth building provides an excellent opportunity for adaptive re-use, since the sawtooth typology was used for industrial purposes. The trusses fully support the roof and allow for an open floor plan to take place below. Another major advantage with a sawtooth building is that it reduces solar gain in the summer and can passively ventilate through openings in the roof.

In the proposed structure, the sawtooth section has the potential to become an atrium space, serving as a welcoming threshold between the indoors and outdoors. The overhead gantry system that extends through both ends of the building, which was previously used to move heavy goods, can help to define the outdoor zones upon

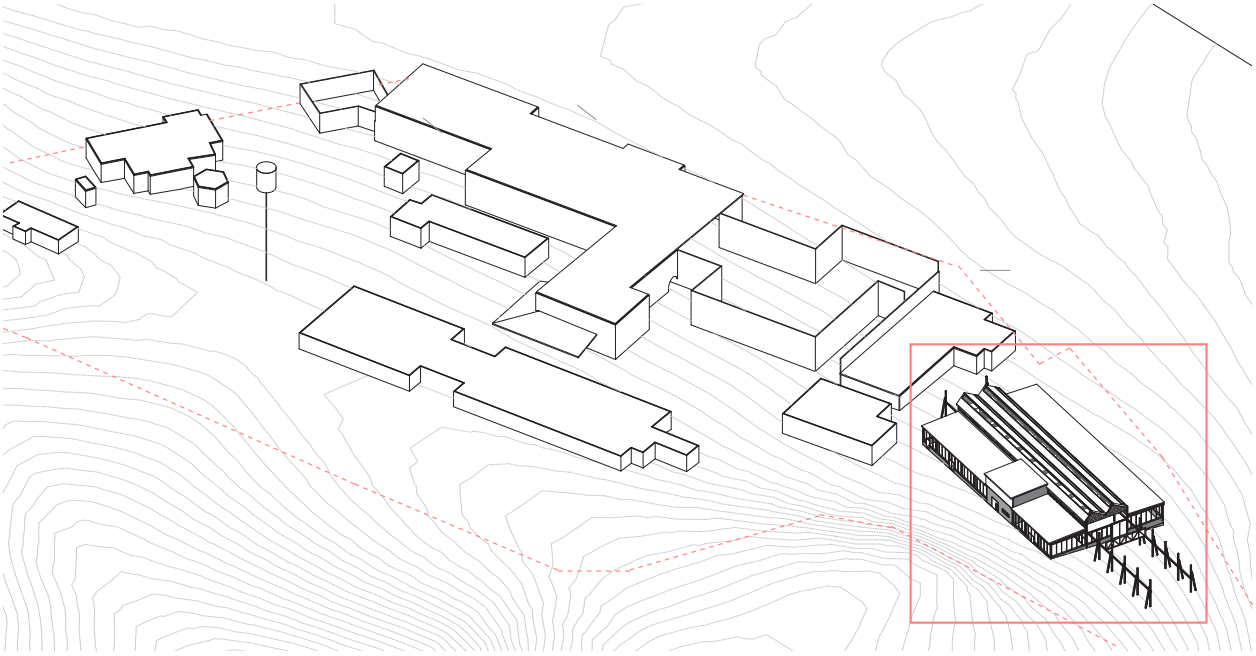

Figure 46: Existing Goat Farm complex highlighting proposed structure

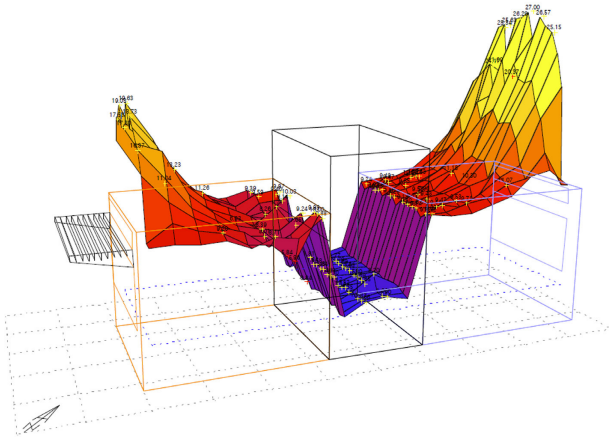

Figure 47: Daylight factor distribution

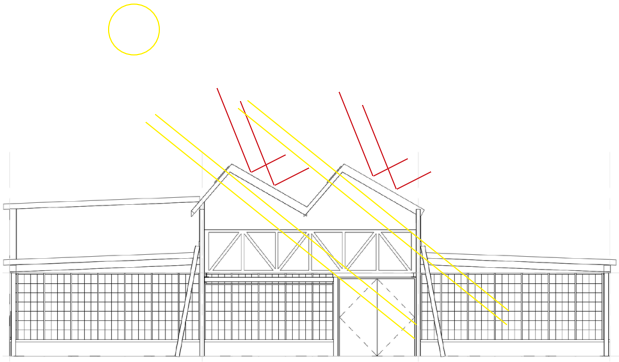

Figure 48: Optimal day lighting

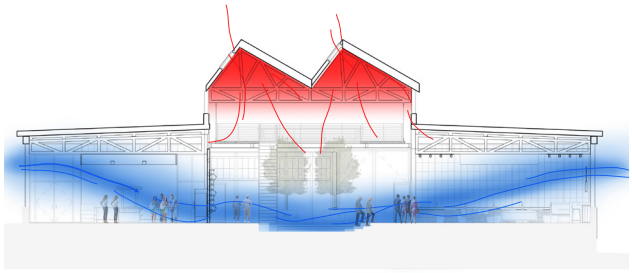

Figure 49: Implementation of passive ventilation strategies

approach. This gantry also provides a sturdy structure to attach a mezzanine level that will serve as another public space of interaction and allow the public elevated views of downtown Atlanta.

The bays on either side of the sawtooth section will serve well as a place for supplementary components such as the office, cafe, gallery and gift shop. The south side of the building has direct views of downtown Atlanta, which would be ideal for the cafe and offices to capitalize on the views toward the city.

I will also salvage any materials on site such as old bricks from condemned buildings and reuse them where applicable. The existing concrete masonry structure, could be utilized to house core service elements, such as the kitchen or water closets that require direct access from the exterior.

CHAPTER IX
A WAY FORWARD

One of my objectives in the master planning of the Goat Farm Art Center is to establish clear paths for both automobile and pedestrian walkways that are easy to maneuver through. It is also crucial to establish where the intersections of these are and to celebrate the node that is being created, while being attentive to the needs and concerns of the private residences and studios. Architectural design moves such as dropped ceilings, seating and floor patterns are implemented in the sawtooth building creating nodes where people are encouraged to converse and collaborate.

"Nodes are points within the city, strategically located, into which the individual enters (and which is often the main focal point to which she or he is traveling to or from). There are often junctions – a crossing or converging of paths. They often have a physical element such as a popular hangout for the individual or a plaza area. In many cases, the nodes are the centers of the district that they are in." (Lynch, 1960)

Among the initial steps of my design was to assess whether the existing buildings on site can continue in their current use or need to be changed in order to create a complex beneficial for the public and operation of the Goat Farm. The next step was to craft a master plan addressing these concerns. One major element in my opinion of any successful project is to instill a sense of arrival upon entering a site. The sense of arrival

Figure 50: Noli Plan

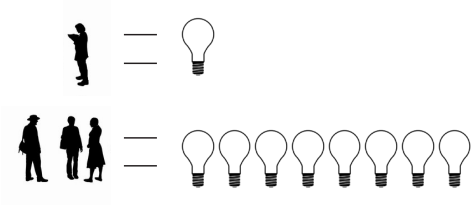

Figure 51: Synergy

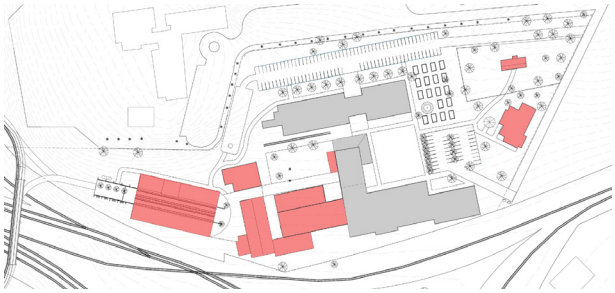

Figure 52: Public vs private

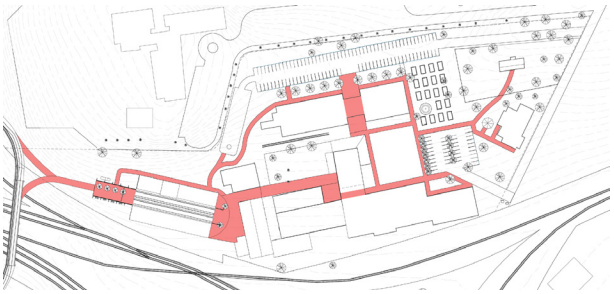

Figure 53: Paths

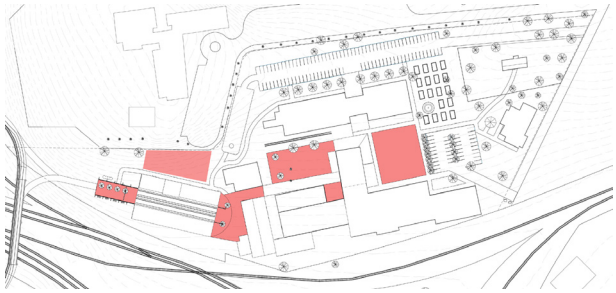

Figure 54: Nodes

is currently lacking at the Goat Farm Arts Center, because upon entering the existing site, there is no place where one can quickly get oriented and introduced to the Arts Center and offerings. I believe that by implementing a visitor center near the entrance, new visitors could be acclimated more easily to the site.

This visitor center will serve as a place where information regarding upcoming events and current activities taking place at the Arts Center will be displayed. This visitor center will also help tell the history of the site and its plan for the future. The visitor center is being implemented as a device to help establish a cohesive and intertwined relationship between the community in the inner Goat Farm and the outer community of Atlanta as a whole. Since the Goat Farm Arts Center has many different artists that use the facility for various purposes, through the combination of artifacts with descriptions, images and literature, the visitor center would be a way to bridge the gap between the artists and outside community.

Implementing a green market or co-op would provide an affordable means of obtaining food and also teaching the community how to live in a more sustainable manner. This will also provide additional income for the community and allow people to get local produce as opposed to traveling to a larger grocery store. This is another tool that will be used to help reinforce a sense of being a community and knowing who your neighbors are. Whether owning a plot or helping others with their's, people would be able to meet each other and contribute to a greater goal.

Auxiliary components such as galleries and offices can bridge the gap between public and private allowing a free exchange between the pedestrians using the BeltLine and the current inhabitants on the proposed site. Due to having residences on site, the Goat Farm turns into a facility that is occupied at all times; this allows there to be "eyes on the street" and create a safer community to live in. Even when performances are not taking place or artist are not working in their studios, residents are living there and taking care of the site.

ID/Previous Use / Proposed Use

1 Machine Shop / Cultural Center

2 Hardware Shop / Black Box Theatre

3 Foundry / Goodson Yard Auditorium

4 Blacksmith Shop / Outdoor Flex-space

5 Pattern Shop / Village Green Venue

6 Warehouse / Floor 1-Studio 2-3 Lofts

7 Shipping / Floor 1-Studio 2-3 Lofts

8 Wood Shop / Floor 1-Studio 2-Lofts

9 Lumber Drying / Floor 1-Studio 2-Lofts

10 Office Building / Demolished

A Ginnery Building / Education Center

B Seed Cotton House / Painters Space

C Water Tower / Water Tower

D Locker Room / Demolished

E Superintendent / Demolished

F Gin Warehouse / Studios

G Paint and Oil House / Studios

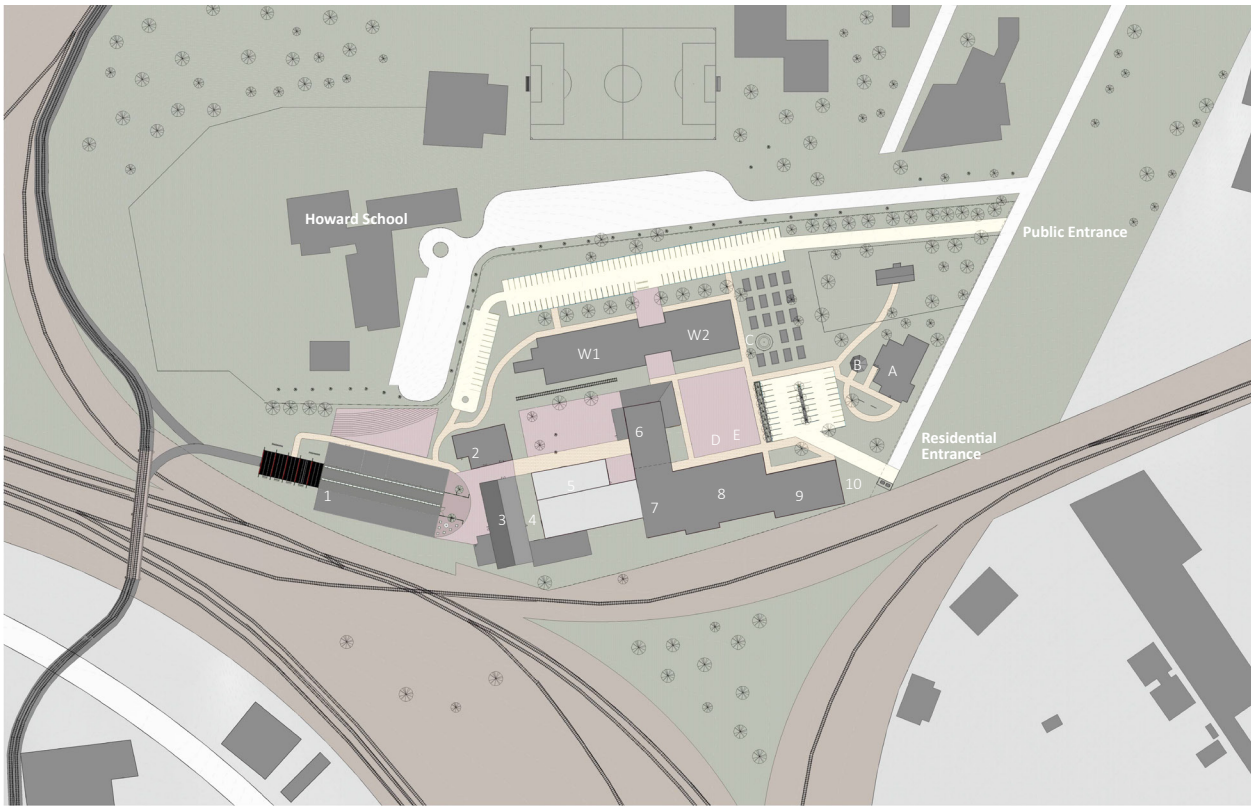

Figure 55: Proposed master plan

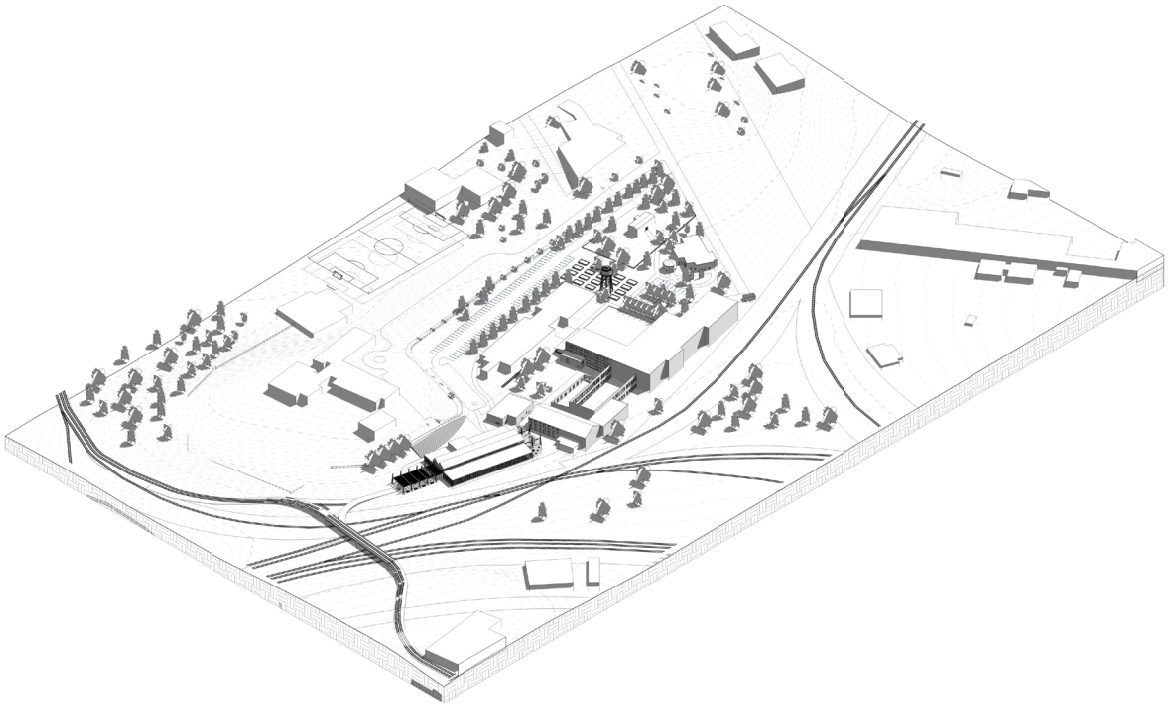

Figure 56: Axon of proposed site

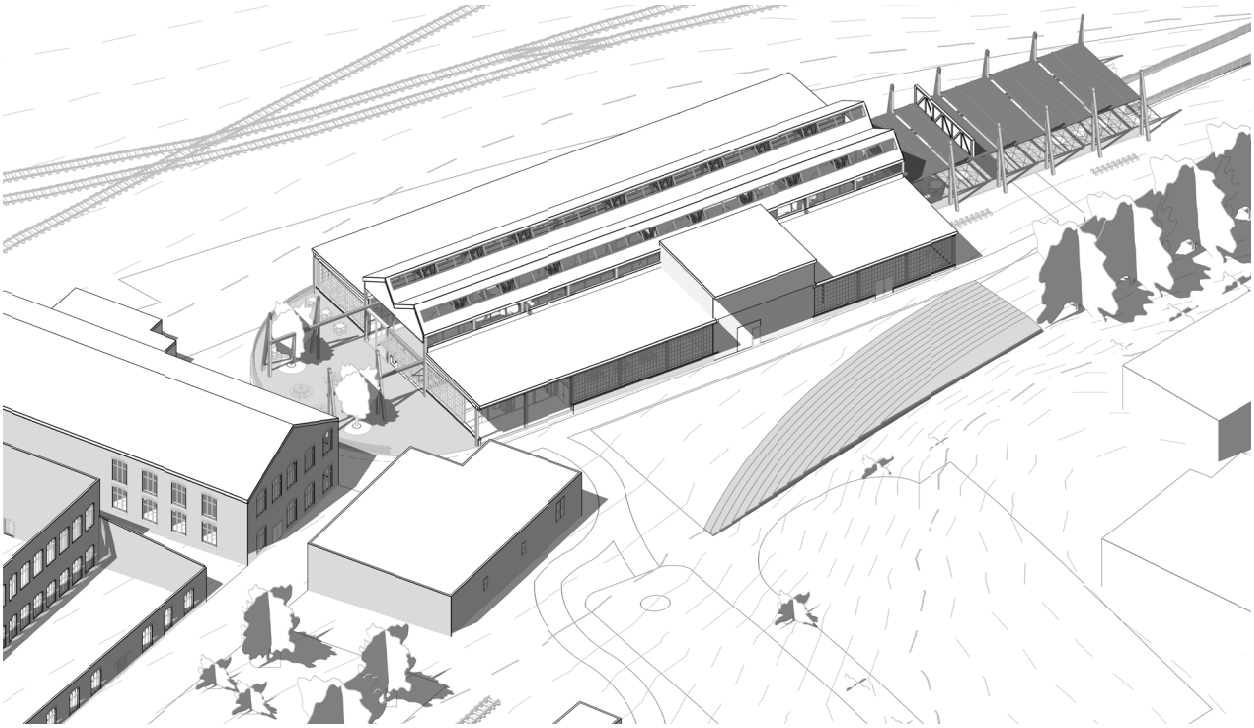

Figure 57: Axon of sawtooth building and public spaces

Program Key

Gift Shop 2000 sq ft

Cafe 2700 sq ft

Gallery 2000 sq ft

Service Core 2050 sq ft

Administration 3500 sq ft

Visitor Orientation 950 sq ft

Atrium 7500 sq ft

Figure 58: Proposed program

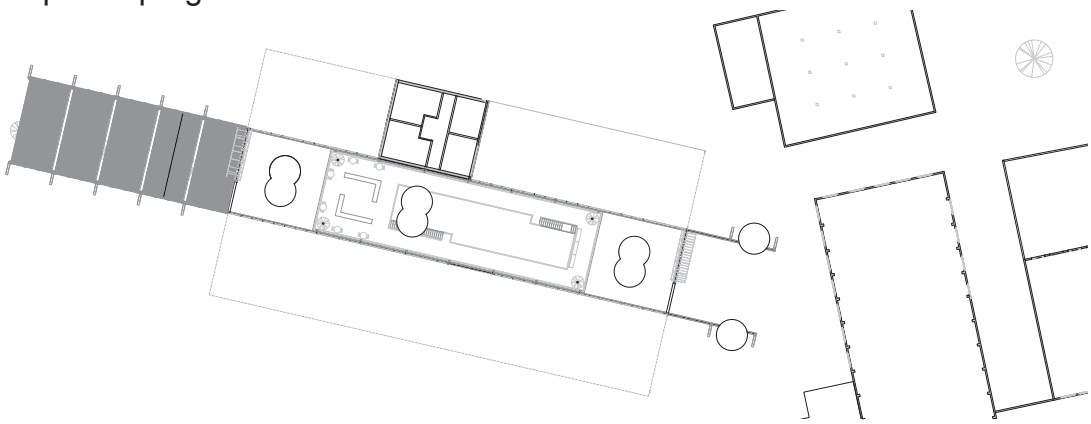

Figure 59: Second floor plan

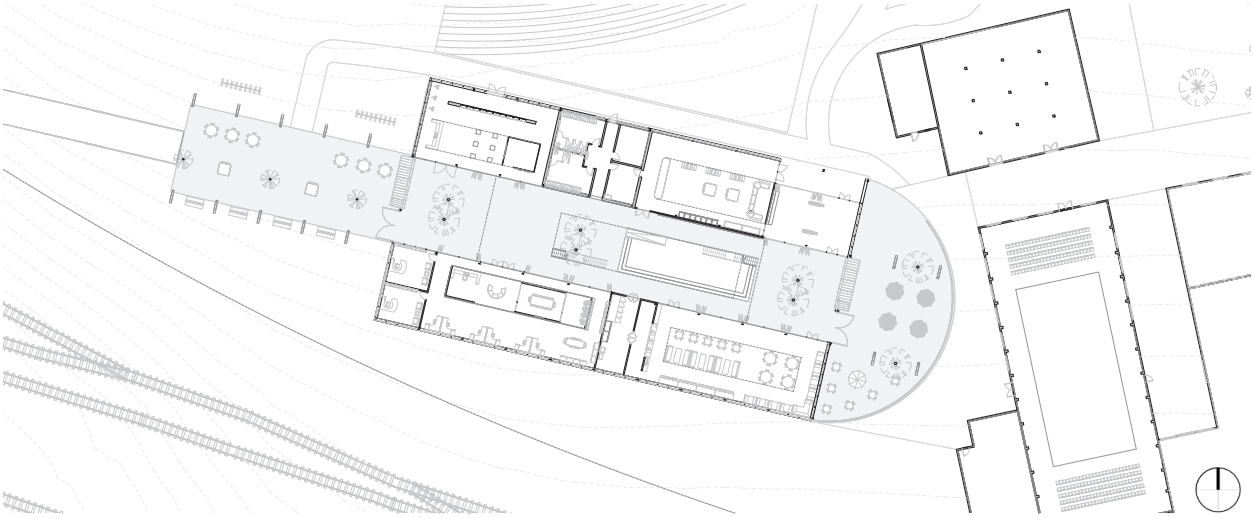

Figure 60: First floor plan

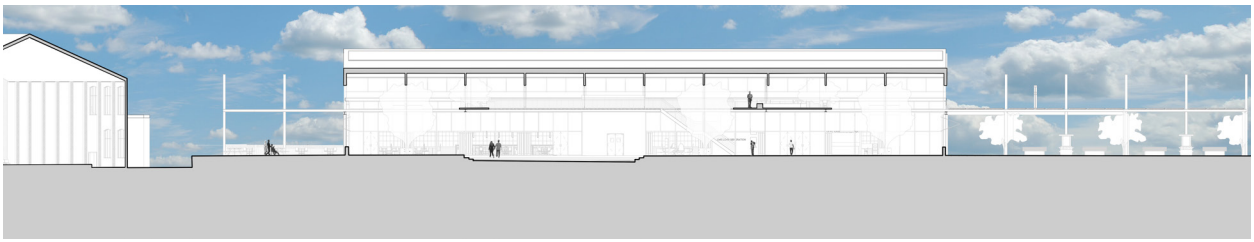

Figure 61: Longitudinal section looking South

Figure 62: Transverse section looking East

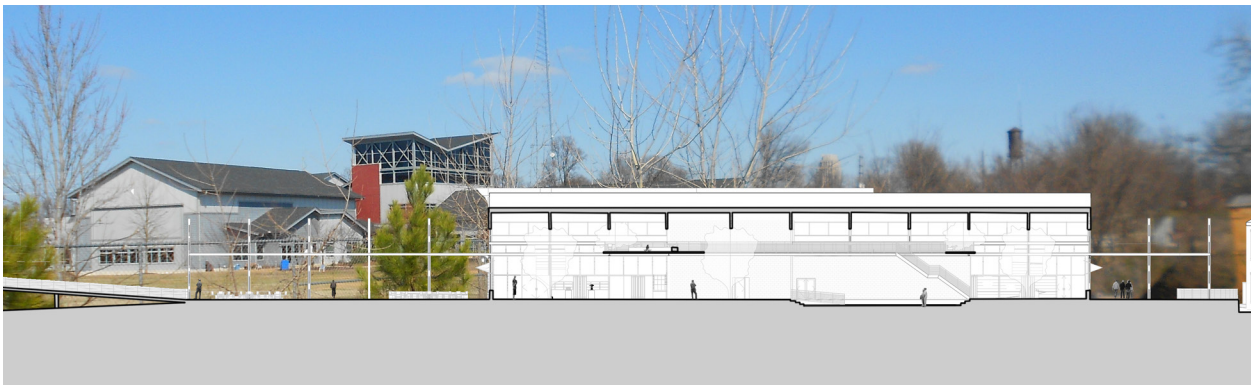

Figure 63: Longitudinal section looking North

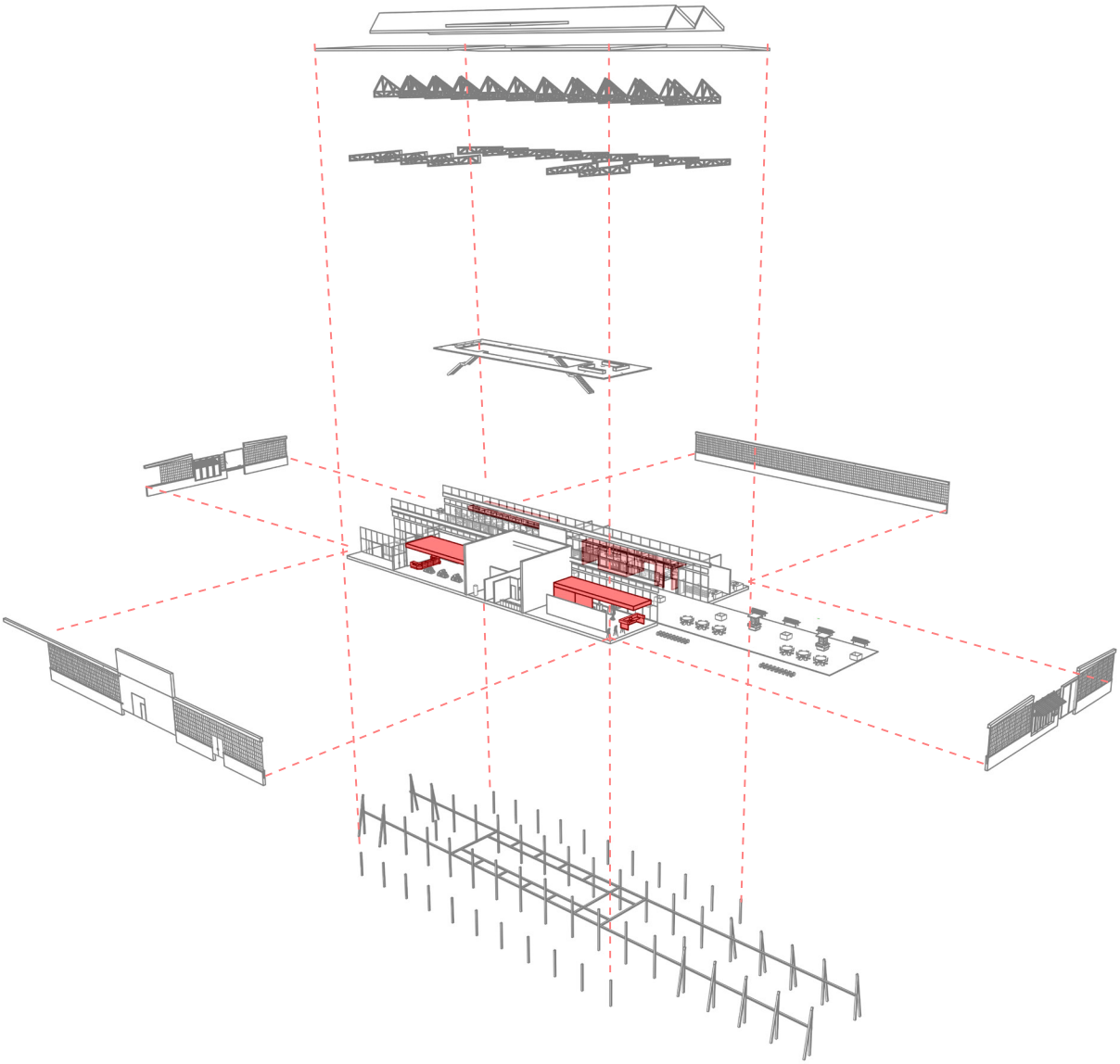

Figure 64: Exploded axon showing proposed program

Figure 65: Approach from BeltLine

Figure 66: Open atrium space

Figure 67: Cafe

Figure 68: Patio area

Figure 69: Gallery

Figure 70: Gift shop

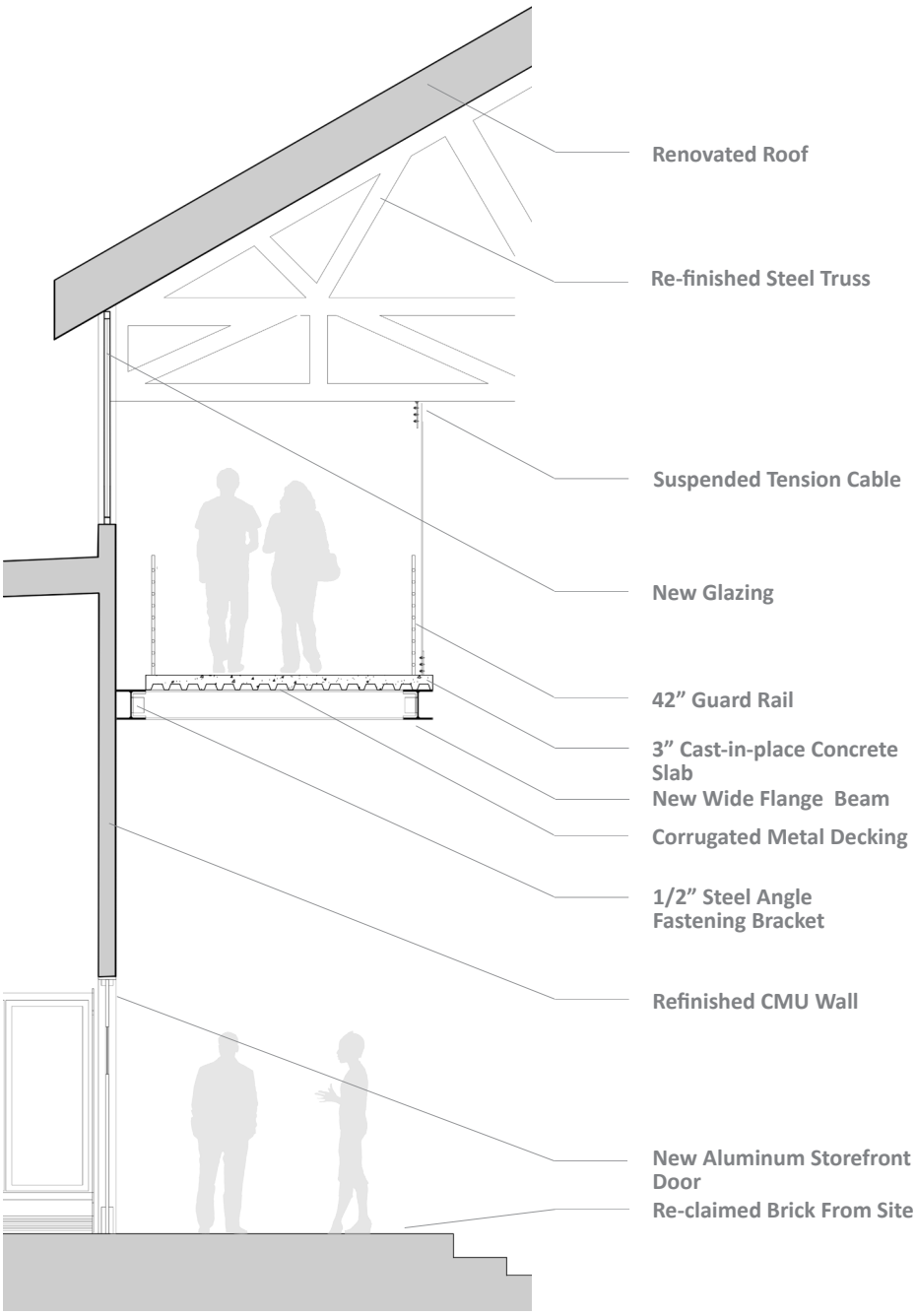

Figure 71: Wall section of mezzanine level addition

Figure 72: Sectional perspective

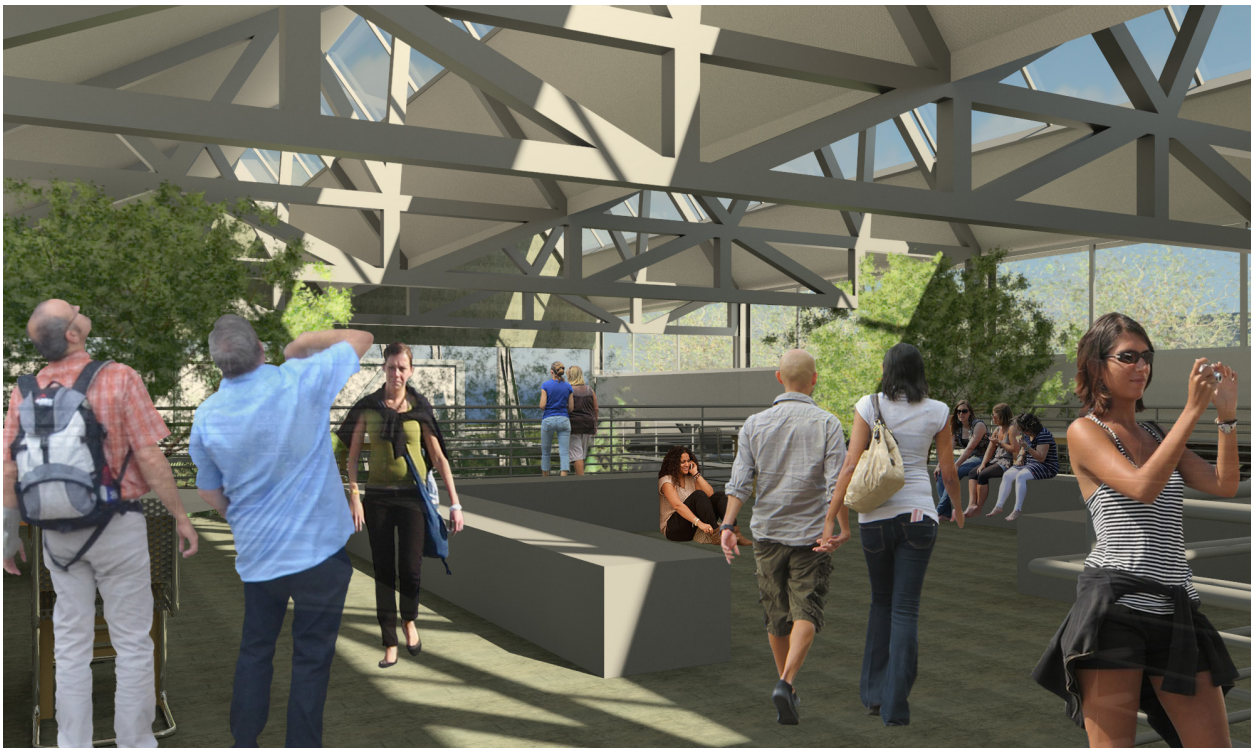

Figure 73: Public mezzanine level

CHAPTER X

CONCLUSION

In conclusion, the goal of my proposal was to create a sustainable community by adding elements in order to promote sustainable living. By connecting this smaller community of the Goat Farm to the city of Atlanta, it is my intention to demonstrate how sustainable communities can exist in an urban condition. Steps have already been taken by the Beltline project to connect over 45 separate neighborhoods through one green way. Another major objective of this thesis was to establish a master plan for the Goat Farm Arts Center focusing on one of these buildings as a case study to implement designs for adapting these structures for a better future use.

Rehabilitating a site is more than reoccupying a vacant lot, it is more about reestablishing a sense of place. It is important to maintain the essence of the historical building and to continue to allow it to relate to it's context. This is easily accomplished by leaving the exterior of the building unchanged or mildly remodeled. Any renovations that are performed on the historical structure need to be easily distinguished from the original structure so that the integrity of the original will not be confused with the new alterations.

Many variables when evaluating what might lead to revitalization of an area, research suggests that density can be extremely beneficial for an urban fabric, and when people become more confined, they become more innovative. Through the implementation of design strategies that allow connectivity, promote collaboration and focus on sustainability, revitalization of a community can occur and can also serve as a precedent for future development.

This thesis project explores how to reduce urban sprawl and ultimately revitalize communities that have been disconnected in the past. A successful implementation of this connectivity can be achieved by adaptive reuse on multiple scales, such as the BeltLine project and on individual properties that are located in the urban context. By implementing

an adaptive reuse approach on many levels, sustainable efforts are occurring on an ecological, economical, and cultural level.

"...metros with higher proportions of employed artistic and cultural workers also have higher incomes, higher rates of innovation, and higher housing prices. The reason is not that artistic and cultural creatives are more likely to launch new businesses or invent new products, but that their location in an area signals that a community is open to diverse groups of people who are open to new ideas and self-expression. The concentration of artistic and cultural creatives in a place is a sign of a local ecosystem that is more conducive to generating new ideas and mobilizing resources around them." (Florida, 2010)

It is not just density in an urban fabric that leads to a city being pedestrian friendly, but also having the necessary infrastructure needed to accommodate this lifestyle. This is being expressed in Geoffrey West's quote below.

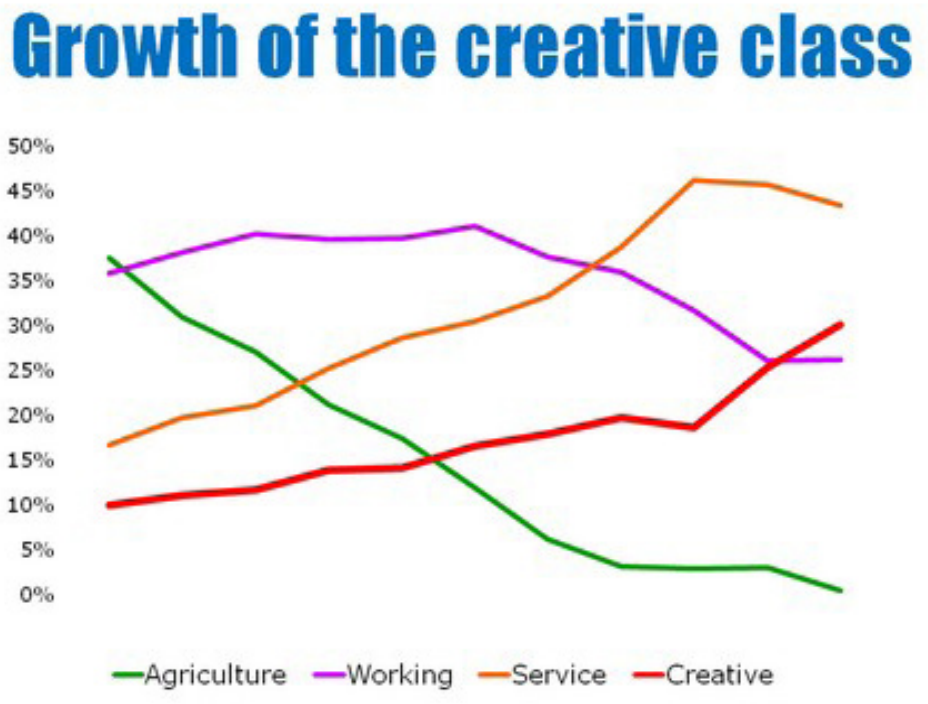

Figure 76: Graph of growth of the creative class

"...one simple number, population, can predict a stunning array of details about any city, from crime rate to economic activity. It's all about the plumbing, he says, the infrastructure that powers growth or dysfunction." (West, 2013)

By reusing the existing building, improving the mobility infrastructure and reconnecting the re-purposed industrial complex in more meaningful ways, principals of sustainable design will lead to a vibrant, contributing community within the larger city context.

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APPENDICES

APPENDIX I
SITE DOCUMENTATION

Figure 75: Google Earth city scale

Figure 76: Google Earth neighborhood scale

Figure 77: Google Earth area scale

Figure 78: Google Earth complex scale

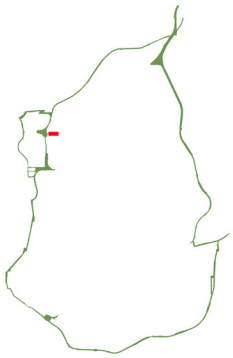

Figure 79: Adjacency to BeltLine

Figure 80: Area of Revitalization

Figure 81: Industrial site with arts agenda

Figure 82: Potential in sawtooth outlier

Development Key

- Railroad tracks
- Residential
- Mixed use
- Institutional / Religious
- Commercial
- Industrial
- Proposed BeltLine

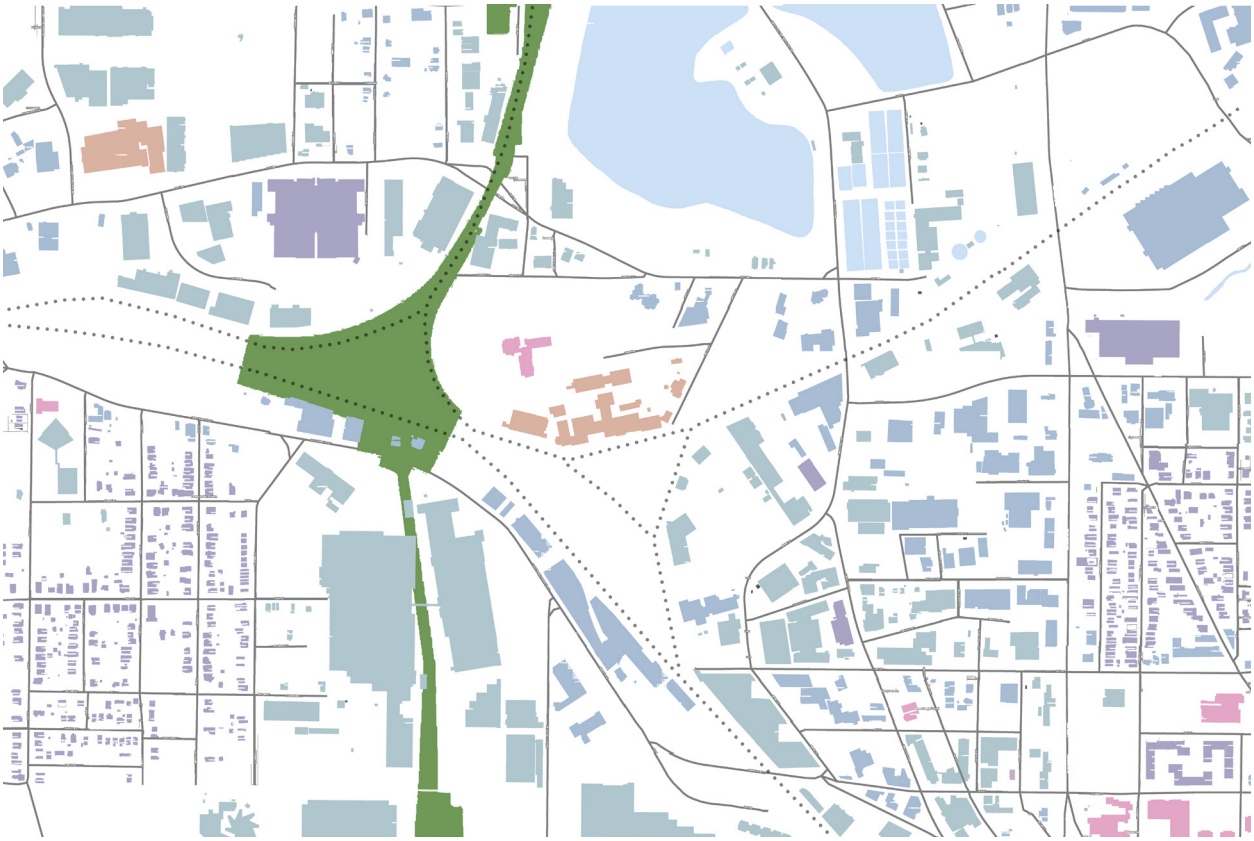

Figure 83: Development Analysis

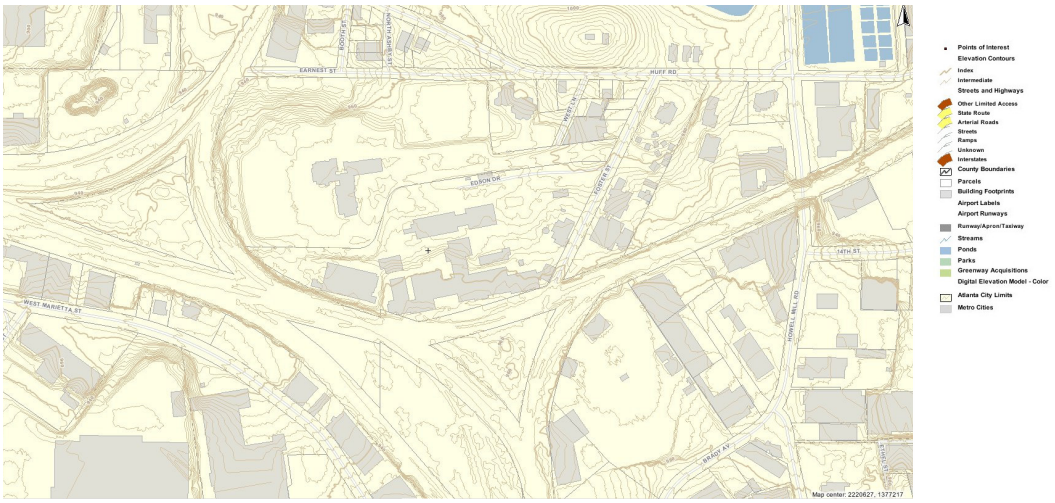

Figure 84: Topography

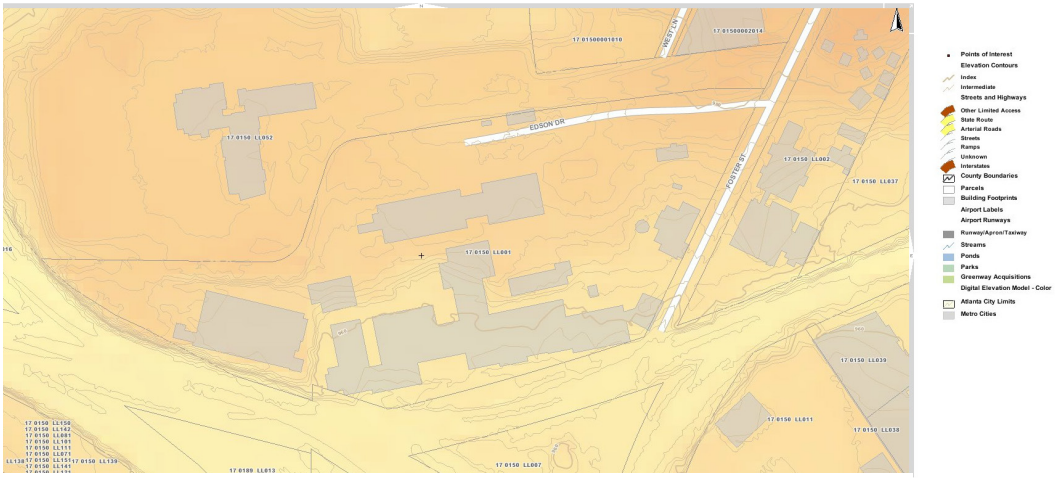

Figure 85: Color coded elevation change

Figure 86: BeltLine Transportation Corridor

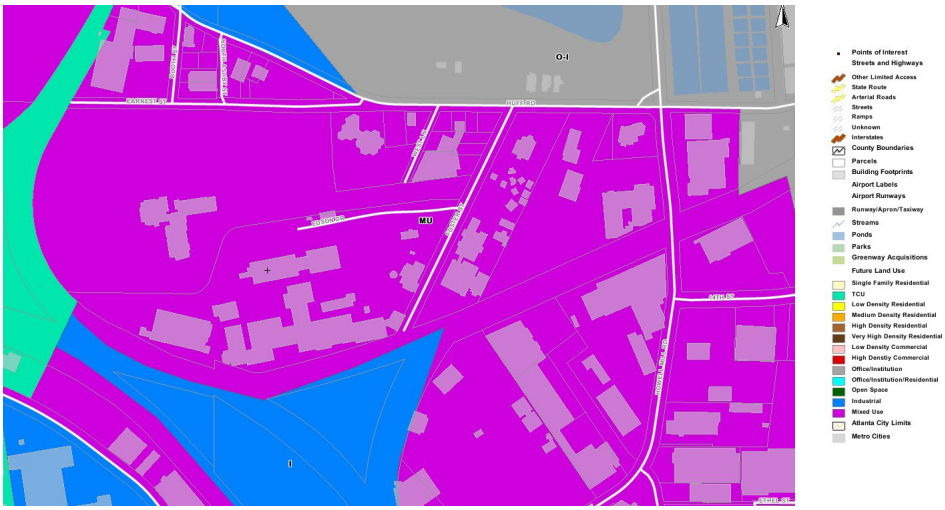

Figure 87: Future land use

Figure 88: Livable Centers Initiative

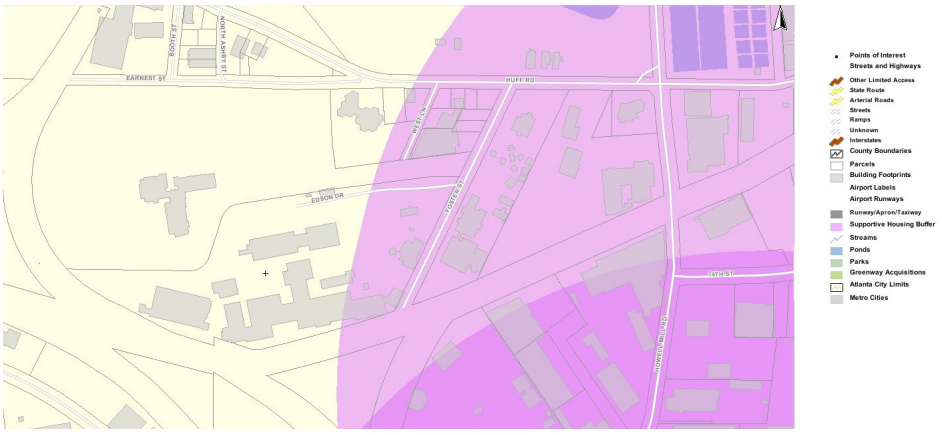

Figure 89: Supportive Housing Buffer

Figure 90: Terrain surface

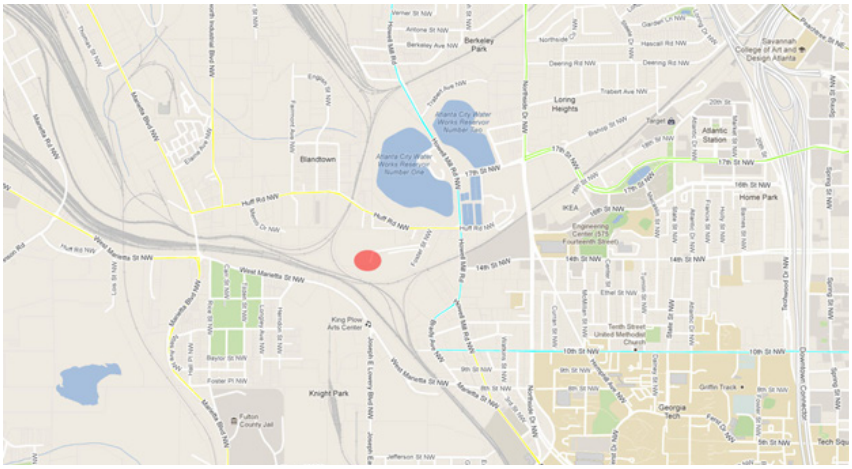

Figure 91: Map of existing transit lines

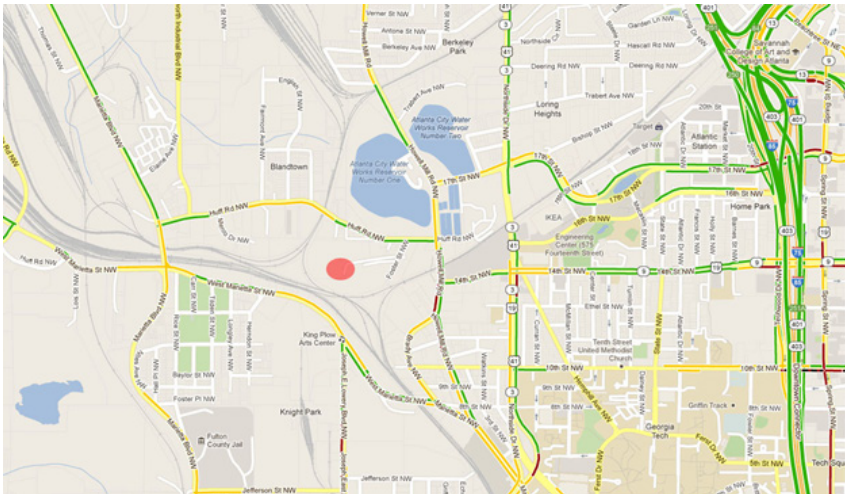

Figure 92: Map of roadways, green represents high traffic

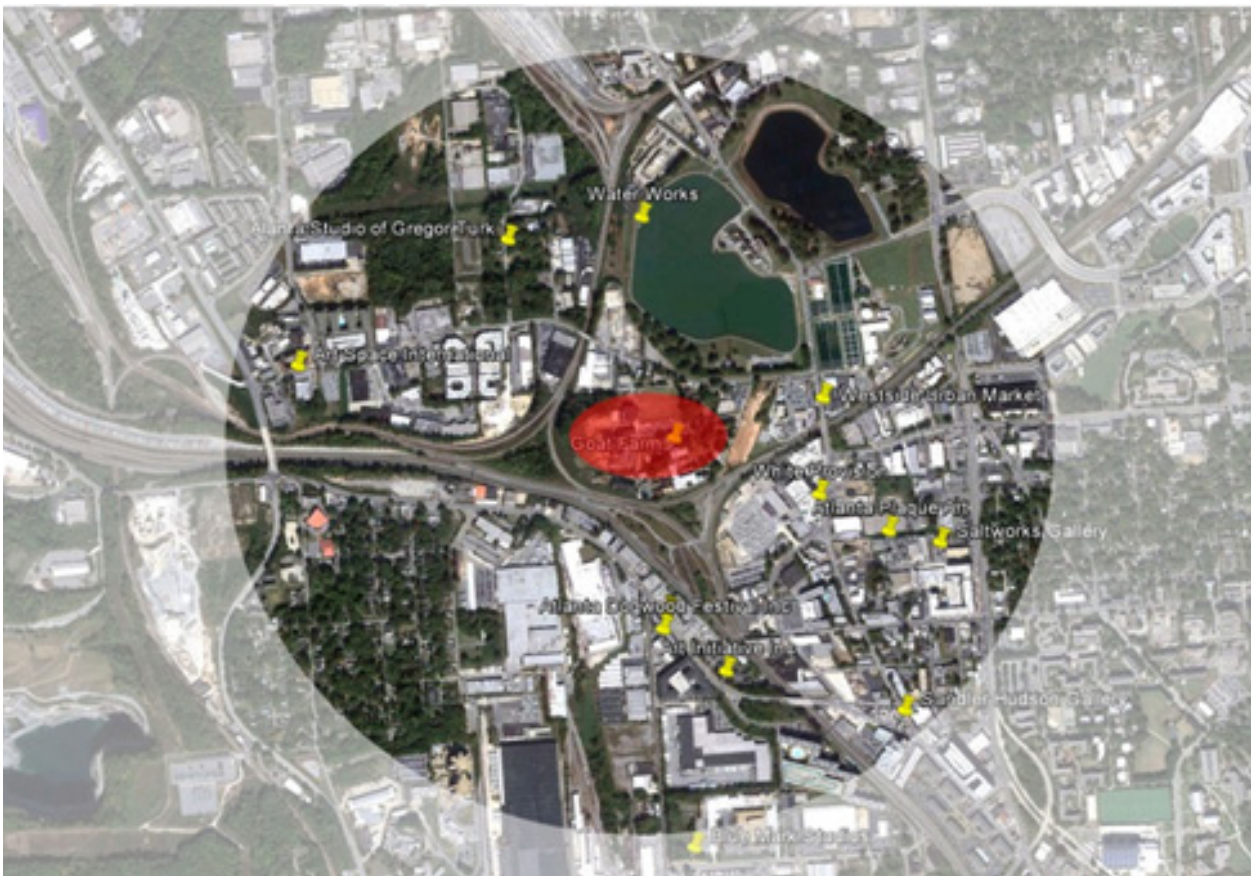

Figure 93: Related developments in close proximity to Goat Farm

APPENDIX II
CASE STUDIES

Recent projects that have successfully implemented adaptive re-use efforts are beginning to demonstrate their ability to serve as a catalyst for revitalization. Diller, Scofidio + Renfro, architects of the High Line, started by documenting the old, existing railroad lines in New York City, and remove them from the site and re-purpose their remnants with an immense amount of landscape and hard scape to create an oasis of urban life. These kinds of projects start to implement the sense of establishing a connection and mutual adaptation between old buildings and modern architecture.

33 Flatbush Avenue was an adaptive re-use project that took place in 2006 in Brooklyn, New York. Three architects who founded Interboro Partners were looking around New York for a new office and found this structure vacant and full of junk, but the client Al Attara had a plan to establish, what Rajagopal referred to as a “creative collective” . Over the next few years this Metropolitan Exchange began a reputation as a place where award winning architects, artists, urban planners, biologists, and many other related disciplines worked. The concept of this place was that not only would these tenants be renting out spaces where they would have neighbors, but that these neighbors would give one entity a connection to another and thus promote the aspect of collaboration among various design practices.

Al Attara wanted to create a counterpoint to a new commercial center nearby that was representative of the typical developer driven building taking place at this time, where they turn buildings into residential complexes in order to make more money. This sense of vertical and horizontal collaboration was being promoted as vital to the success of the building and its intentions. For example, some of the smaller firms in town were having a hard time competing with the larger firms and by teaming up with other similar architects they could receive joint ventures on projects that would have previously went to larger

Figure 94: Highline New York City

Figure 95: Brooklyn Radio, 33 Flatbush Ave

Figure 96: Office Building, 33 Flatbush Ave

firms. Even if businesses choose to not collaborate on its work they still are immersed in this building where they feel as if they are part of a larger whole.

This was more a project in adding to the use of the building, the major component that intrigued me was the sense of community that was being presented. It is hard to establish a building that has tenants that are representative of the holistic ideals of the owner. If there is a strong enough sense of community and collaboration in a place that seems to be productive and healthy for these businesses, then the project is successful due to the tenants in it benefitting from each other. In my project I am examining artist residency and other necessary artist spaces that would involve a lot of communication and mutual interaction among artist and others.

Eitel Building City Apartments designed by the BKV Group is an adaptive reuse project of an old

hospital that is located in downtown Minneapolis, Minnesota. The Eitel Hospital is one of the buildings listed on the National Register of Historic Places. The Hospital was built in 1911 and designed by Lowell A. Lamoreaux. This maternity hospital was a plain brick building with an original cornice that was removed many years ago. The original hospital included sun porches with Navajo rugs, brass beds and mahogany furniture. The hospital was founded by George Eitel and mainly served as healthcare for the higher class citizens of Minneapolis. In 1985 the hospital closed and in 2005 Village Green Companies whose client submitted a proposal for adapting the existing hospital into apartments. Ground was broken in 2006 and Eitel building City Apartments was completed in 2008.

The design for the renovation of the hospital into apartments made sure to examine the local context, as to make sure that some of the components of the design would fit into the surrounding vernacular. This would include the new cornice and parapet designed to match the older ones. While at the same time implementing some new materials to make sure to distinguish what is being preserved and what is part of the new addition. The government mandates that there is a clear separation from old and new construction. The architects in charge of the renovation chose to emphasize this concept and used corrugated metal panels on the facade and turned the corners with glass which would be contrary to the masonry construction prior while the interior lobby reveals the concrete structure from the past. In the interior BKV chose to use motifs reminiscent of Asian design. This project was extremely challenging as like many projects where there are tax credits along with federal guidelines for preserving historic architecture. These incentives would cover the cost of recreating the cornice and repairing the old glazed brick which cannot be replaced anymore.

There were many urban design neighborhood meetings where the issues at hand were discussed in front of a committee. The residents from that neighborhood expressed

much concern for the renovation to not belittle the older buildings around Loring Park which was in close proximity. Another design challenge was updating an older building in order to have some of the amenities that would help draw in the young professionals from the downtown area.

Another aspect of this design that was executed well was the landscaping. They chose to create both areas of pleasure for the private and public. The Twin Cities have many suggestions on what species of plants would be suitable. This renovation added such strategies such as underground tanks that filter sediment and controls the water quality before it leaves the building. They also used recycled glass along with cement as a paving pattern. The storm water would be used irrigation. It is the amenities along with the quality architecture that can be the difference between having a successful development in an age of recession. After the recession a few years ago, it is clear that not as much will be built, but what does will hopefully be of better quality and reflect development that we would like to see in the future.

Figure 97: Eitel Building City Apartments after renovation

Another example of this was one designed by ICA Arquitectura where they adapt a large industrial building into a Centre for Contemporary Arts. This is located in Madrid, Spain and there seems to be an initiative to take the municipal slaughterhouse and livestock market and transform them into art-oriented buildings. Existing components were reused, for example, the hooks that previously hung carcasses now hang pieces of art. The remodel incorporated the use of double height steel pivoted doors that can be adjusted to alter lighting and accommodate various arrangements of display space. The use of the system of doors allows maximum flexibility while having multipurpose rooms such as larger halls for concerts or voids for installations. They made sure to blend the new parts with the historic structure by focusing on new parts that represented the robustness of the slaughterhouses of the past.

Figure 98: ICA Arquitectura adaptive re-use project

VITA

Jason Stuart Pimsler was born in Atlanta, Georgia where he attended Grady High School. In 2005 Jason entered Appalachian State University in Boone, North Carolina where he earned a Bachelor of Science in Building Science with a concentration in Architectural Technology and Design and a minor in Community and Regional Planning.

Throughout Jason's academic career he has interned at multiple firms both in Atlanta and Knoxville. He is awaiting his Master of Architecture degree from the University of Tennessee in the Spring of 2013 and currently lives in Knoxville.